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Outcomes of the in-depth reviews carried out by the Conference of European Statisticians Bureau

Outcome of the in-depth review of leading, composite and sentiment indicators

Note by the Secretariat

Addendum

Summary

This note provides information on the outcome of the in-depth review of leading, composite and sentiment indicators carried out by the Bureau of the Conference of European Statisticians in January 2014.

The review explored countries' experience and summarised international statistical activities in leading, composite and sentiment indicators, and considered the role of official statistics in this connection. As a basis for the in-depth review, the Secretariat carried out a short survey on the practices of national statistical offices and received 38 replies.

The in-depth review was based on a paper by the Secretariat. The updated in-depth review paper has been submitted to the Conference as document ECE/CES/2014/10.

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I. Introduction

1. The Bureau of the Conference of European Statisticians (CES) reviews each year selected statistical areas in depth. The purpose of the reviews is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe (UNECE), identify issues and problems, and make recommendations for possible follow-up actions. The paper focuses on strategic issues and highlights concerns of statistical offices of both a conceptual and a coordinating nature.

2. The CES Bureau selected the topic of leading, composite and sentiment indicators for review to consider the role of official statistics in relation to these indicators which are increasingly used to compare countries' performance and for policy making.

3. The review paper provides an overview of current work and challenges in this area. The paper summarises the main developments in the field composed of numerous, new initiatives. The review was based on information from the Internet, the short survey of CES member countries, and two stocktaking reports on composite indicators prepared by the United Nations Development Programme (UNDP) and the Joint Research Centre of the European Commission.

4. Considering the challenges in the area, the Bureau selected leading, composite and sentiment indicators and official statistics for discussion at the 2014 CES plenary session. The purpose is to seek input from the CES member countries for considering possible further work in the area. The following section suggests some issues for discussion at the plenary session.

5. The updated version of the in-depth review paper is presented as document ECE/CES/BUR/2014/10. The conclusions and recommendations resulting from the in-depth review are presented in section VI of this document.

II. In-depth review discussion and decision by the Bureau

6. The Bureau discussed leading, composite and sentiment indicators in January 2014. Representatives of three Swiss universities had contacted the UNECE secretariat before the CES Bureau meeting with a proposal to cooperate on a research project on composite indicators. The aim of the project is to review a number of composite indicators and analyse their conceptual meaningfulness, statistical robustness and role in public debates. Mr. Sperlich (University of Geneva) and Mr. Dembinski (Observatoire de la Finance, Geneva, University of Fribourg) were invited to the Bureau meeting to present the proposal. The following points were raised in the discussion at the Bureau meeting:

(a) Strong demand exists for leading, composite and sentiment indicators. If statistical offices do not use their data and expertise to produce these indicators, other organizations may compile them with lower quality;

(b) On one hand, official statisticians are very cautious about leading, composite and sentiment indicators. Some statistical offices do not consider that producing such indicators provides a competitive advantage and is a good use of the limited resources. On the other hand, many national statistical offices and international organizations (such as OECD) are already producing leading, composite and sentiment indicators. Official statistics provide the quality criteria to ensure that the indicators are based on a sound methodology and can guide users on how to interpret the indicators. Producing these kind of indicators can improve users' perception of the relevance and value of official statistics;

(c) The area lacks international coordination and a systematic approach. There is a need for discussion at international level to achieve a common understanding of the role of statistical offices in this area. The in-depth review paper presents good proposals for further work. Organising a workshop or seminar on this topic could be considered;

(d) Collaboration with researchers is important. The research project proposed by the Swiss universities was considered useful. It was suggested that the project could focus on a few policy areas instead of covering the whole range. The outcomes of the project would be a valuable contribution to the discussion;

(e) It would be useful to develop a taxonomy of leading, composite and sentiment indicators. Various indicators are produced in countries and there is room for harmonization to enable better international comparability and reliability;

(f) The challenges related to leading and composite indicators are different from the sentiment indicators. There is a link between leading indicators and Big Data. Compiling composite indicators may require value judgments concerning the weighting of different components. This is not in line with the Fundamental Principles of official statistics;

(g) Providing a quality checklist for users might be a practical approach;

(h) The Active Ageing Index produced by UNECE will be added to the indicators described in the paper;

(i) Eurostat provided detailed comments in writing focusing on the need for a coherent classification and giving further information on on-going activities.

7. Following the Bureau decision the Secretariat updated the in-depth review paper to take into account comments by the Bureau (ECE/CES/2014/10). The topic will be discussed at the CES plenary session on 11 April 2014 (under agenda item 7a) to seek input from the CES members.

8. The Secretariat will prepare a proposal for further work, based on the CES discussion, for the October 2014 Bureau meeting. The Secretariat will follow up on the Swiss research project on composite indicators.

III. Key issues to be discussed

9. The challenges for official statistics are somewhat different concerning the leading, composite and sentiment indicators. Below is a short list of issues related to each type of indicators that can provide ideas for discussion at the Conference.

A. Leading indicators

10. Leading indicators are time series that show a leading relationship with economic movements such as growth, business-cycle and growth-cycle. Typically, leading indicators are constructed to predict the cycles of industrial production or gross domestic product (GDP), which are seen as proxy measures for economic development.

11. Some statistical offices produce leading indicators, whereas in most cases these indicators are produced by central banks, research institutes or private companies. Leading indicators are often economic indicators. However, reliability of the indicators and the use of econometric modelling may cause challenges for official statistics. On the other hand, producing leading indicators could boost the image of the statistical office as a provider of timely data.

12. **Issues for discussion:** The key issues to be considered regarding leading indicators relate to the role of official statistics: Would it be helpful, possibly in collaboration with the academia, to identify a list of potential leading indicators that could be produced with the involvement of statistical offices? Social and environmental statistics are often less timely than economic statistics. Would it be useful to develop leading indicators for social and environment statistics? These indicators could help to anticipate changes in societal wellbeing or monitor drivers of environmental changes.

B. Composite indicators

13. Composite indicators are formed when individual indicators are compiled into a single index on the basis of an underlying model of the multi-dimensional concept that is being measured. There are different kinds of composite indicators some of which are produced by official statistics (e.g. GDP).

14. Weighting and aggregating variables measured in different units is the key concern that affects the reliability of composite indicators, as these processes require judgement. Issues here are related to whether, where and how official statistics should be involved.

15. **Issues for discussion:** Would it be useful to define criteria for the types of composite indicators that national statistical offices' could produce or contribute to? The criteria could include for example high policy relevance of the indicator, availability of well-developed methodology and analytical soundness of the indicator. Another question is how to avoid misinterpretation. How could statistical offices react if composite indicators are based on official statistics but present a distorted picture of reality?

C. Sentiment indicators

16. Sentiment indicators are usually designed to show how a group feels about the market, business environment or some other factor. National statistical offices are increasingly getting involved in compiling sentiment indicators, e.g. consumer and/or business confidence indicators.

17. **Issues for discussion:** The issues here mainly deal with how to combine the role of national statistical offices as a producer of objective statistics with the production of statistics based on sentiments and expectations? Are these roles contradictory?

IV. Proposal for the Conference

18. The Conference of European Statisticians is invited to discuss the role of official statistics with regard to leading, composite and sentiment indicators. The CES members are invited to present their views on the possible way forward in this area. Organizing a workshop or seminar on this topic, or establishing a small group of countries and international organizations could be considered with the aim to look at the following issues:

(a) Defining the **responsibilities and boundaries** of national statistical offices' role with regard to leading, composite and sentiment indicators could be useful. Currently, national statistical offices' views regarding their role in this area are diverse. What are the current problems faced by statistical offices in this area? Should statistical offices be more active in providing data for these purposes or also offer their competence for improving the quality of the existing indicators? What kind of involvement of statistical offices would be most feasible and beneficial for users? Could a taxonomy of leading, composite and

sentiment indicators be developed, and what could be the criteria for the involvement of statistical offices in this area?

(b) The **communication challenge** is a crosscutting issue that is linked to the threats and opportunities for national statistical offices' involvement in leading, composite and sentiment indicators. How could statistical offices best support users of the various indicators – could a quality checklist be developed? To what extend could communication solve the potential threats to national statistical offices in this area? What would such a communication strategy include?

19. The Conference is also invited to endorse the outcome of the in-depth review of leading, composite and sentiment indicators, and take note of the updated in-depth review paper by the Secretariat (ECE/CES/2014/10).